

Title (en)

ASYMMETRIC BATTERY HAVING A SEMI-SOLID CATHODE AND HIGH ENERGY DENSITY ANODE

Title (de)

ASYMMETRISCHE BATTERIE MIT HALBFESTER KATHODE UND EINER ANODE VON HOHER ENERGIEDICHTE

Title (fr)

BATTERIE ASYMÉTRIQUE DOTÉE D'UNE CATHODE MONOLITHIQUE ET D'UNE ANODE À HAUTE DENSITÉ D'ÉNERGIE

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Application

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Abstract (en)

Embodiments described herein relate generally to devices, systems and methods of producing high energy density batteries having a semi-solid cathode that is thicker than the anode. An electrochemical cell can include a positive electrode current collector, a negative electrode current collector and an ion-permeable membrane disposed between the positive electrode current collector and the negative electrode current collector. The ion-permeable membrane is spaced a first distance from the positive electrode current collector and at least partially defines a positive electroactive zone. The ion-permeable membrane is spaced a second distance from the negative electrode current collector and at least partially defines a negative electroactive zone. The second distance is less than the first distance. A semi-solid cathode that includes a suspension of an active material and a conductive material in a nonaqueous liquid electrolyte is disposed in the positive electroactive zone, and an anode is disposed in the negative electroactive zone.

IPC 8 full level

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CPC (source: EP US)

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